

in the number of new nurses entering the profession.

Per cents of nurses employed in several states are shown in Table 3 according to five selected age-marital status variables. An examination of these comparisons can be indicative of the areas wherein it is most likely that more nurses could be urged to return to activity.

A comparison between the percentage employed in California and in other states shows that the greatest disparity is among nurses aged 60 and over, followed by widows, those aged 50 to 59, married persons, and those in the age group 40 to 49. In other categories not shown in Table 3, California is average or above average in per cents employed. In all of the categories shown, even those states with the highest active nurse/population ratios exceed California in the per cent of nurses employed.

Similarities can be observed between some of the age-marital status categories; many of the same persons shown in the categories over 50 are widows, and many of those who are aged 40 to 49 are those who are married. Data were not cross-classified in the source material, however; therefore, these variables cannot be isolated or analyzed in greater depth.

Nurses aged 60 and over are probably underemployed in California. Only 46.4 per cent of all nurses in this age group are actively engaged in their profession, while the average of seven states with the highest active nurse/population ratios is 55.5 per cent; the national average is 59.6 per cent; and the average in states with low ratios is 64.1 per cent.

Widows constitute the next most promising pool of nurses in terms of the disparity between those employed and those who might be expected to be in the labor market. Fewer than two out of three California nurses who are widowed are employed, while over three-fourths (75.5 per cent) are employed nationally and almost four-fifths (79.1 per cent) are employed in low active nurse/population ratio states. The average per cent employed in high-ratio states also exceeds that in California by a considerable margin.

Among those 50 to 59 years of age, a group in which the activity level is generally quite high, only two out of three California nurses (66.9 per cent) are active. In high-ratio states the average is 71.5 per cent; nationally it is 73.4 per cent and in low-ratio states it is 76.9 per cent.

Married nurses show a greater tendency in Cali-

fornia to be inactive than they do elsewhere in the nation. Although the differential is not so great as in the previous three categories, the potential in terms of numbers of nurses is far greater, since over two-thirds (66.8 per cent) of *all* nurses in California are married. If the percentage employed in the state matched the national average, it would add almost 3,600 nurses in the current supply. Married nurses appear to be a very important source of manpower in low-ratio states, judging from the disparity between the per cent employed nationally and those employed in these seven states.

Nurses aged 40 to 49, who often are the same ones as those shown in the prior category, provide an important source for potential manpower; however, they do not constitute a particularly well defined group. This is unfortunate, since even high-ratio states show a greater proportion of employed nurses in this age group than is shown in California.

It should be noted that these comparisons should only be used as general indicators of identifying unused nursing resources which could most easily be activated to ameliorate current shortages. Comparisons between and among various states are always subject to difficulties due to inherent interregional differences. Nevertheless, there appears to be strong evidence that, in California more than elsewhere, any nursing shortage which exists is more attributable to underutilization than to undersupply. Certainly, this important ratio lags behind that for other health manpower personnel. There is only one important area in the health manpower field where California ranks as low as twentieth nationally; unfortunately, nursing happens to be the one.

## Medicolegal Responsibilities In Physician-Laboratory Relations

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HOW MANY PHYSICIANS could practice as good medicine and surgery without laboratory assist-

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ance? Indeed, has not laboratory medicine itself done much to extend medical competency in many fields? Though traditionally of diagnostic value, laboratories now can provide means for better understanding of disease process and its management. A glance at the advances in enzyme chemistry should convince most doubters of this, and more is on the way. Of course, the laboratory does not "treat" patients in the usual sense of that word, but it no longer has the status of being a mere tool for medical practitioners. This is something all doctors should realize, for the use of and knowledge about laboratory medicine is being injected more and more into the responsibilities expected of physicians.

Clinical laboratories seldom have been involved directly in malpractice cases, but this does not mean they lack potential liability problems.<sup>1</sup> Rather, their immunity seems to stem from a combination of factors over which they have little control. First, laboratories have less contact with patients than do practicing physicians, and this reduces the degree of interpersonal conflict from which many suits arise. Second, when actual contacts are made with patients, the procedures performed usually possess fewer risks of physical injury when compared with medical and surgical manipulations carried out by attending physicians. Third, with respect to specific test performance, patients find it extremely difficult to prove that an apparent incorrect result was due to negligent conduct (particularly when a test consumes the entire specimen, leaving nothing for subsequent checking). However, as attorneys representing patients become more medically oriented, I suspect this factor will afford diminishing protection for laboratories.

The fourth and perhaps most significant protector of laboratories is the medicolegal insulation provided by the "ordering" physician. It is he who decides a test is necessary despite whatever risk of injury it may involve. It is he who may have the responsibility of preparing the patient to assure an adequate specimen for dependable laboratory results. It is he who must interpret the results, sometimes to the extent of detecting incorrect information in light of other knowledge he possesses about his patient. That is, in spite of possible laboratory negligence, he may be liable for relying on a test answer which he should have known was false. Finally, he may even "protect" a substandard laboratory by exposing himself to primary liability for relying on such a laboratory when he

knows or should know it does not deserve his reliance.

While completely divorced from possible laboratory liability, doctors face additional medical and legal risks by failing to order tests when indicated, by ordering the wrong test when another is mandatory, by failing to follow-up prior results with further testing to assure adequate management and disease response, or by failing to recognize the limitations of reliability inherent in many tests even when correctly performed.

Each of these points has posed liability threats to some physicians at one time or another; and, as laboratory technology becomes more intricate, these "protective" hazards will become more prominent in malpractice suits. Suits directly against laboratories may be on the increase, but this will offer no solace to practicing physicians.

Is it possible for active doctors to keep abreast of each new test that comes along or even with refinements of basic tests? If not, how are they to fulfill potential responsibilities of knowing what to order, when to order, how to assure proper specimens, how to interpret, and what to do subsequently? When these issues arise in malpractice cases, they can become very real threats to legal security.

Resolution of many pitfalls in the physician-laboratory relationship rests primarily on communication. How often do physicians consult laboratories concerning available tests, interpretations, and other information? If the laboratory director is a physician, he should be the best source of continuing education and assistance; yet it appears this is frequently overlooked. Clearly, utilization of this aspect of laboratory service will benefit both physicians and their patients.

Many laboratories operated by non-physicians offer excellent technical services; however, adequate clinical advice from these sources is often lacking. Using them may be justified in the absence of physician-operated units, but it must be remembered that some of them do not meet the test of excellence. Therefore, a form of examination and certification is vital. Only then can doctors establish a right of reliance without personal evaluation of the facilities.

Economy alone is not a sound reason for eliminating necessary clinical-pathological consultation, yet it is distressing to note the trend of using out-of-state laboratories for tests which could be performed locally. Without an on-the-spot examination by the doctor, he may find it difficult, if not

impossible, to prove his right to rely on that laboratory. Additionally, I have yet to find an out-of-state laboratory which is willing to commit itself in advance to local jurisdiction in the event of legal action.

The trend toward better medicine and the harassment by mounting malpractice litigation de-

mand recognition of the value of physician-operated laboratories. Improved communication with physician-directors will do much to prevent liability risks which are now developing.

#### REFERENCE

1. Mills, D. H.: Malpractice and the clinical laboratory, *Science*, 144:638, 8 May 1964.

